Amendments to the Claims:

Please amend the claims as set forth below:

1. (currently amended) A constrained-envelope digital communications transmitter circuit comprising:

a pulse-spreading filter configured to receive a quadrature phase-point signal stream of digitized quadrature phase points and produce a filtered signal stream, said filtered signal stream exhibiting energy corresponding to each phase point spread throughout a plurality of unit baud intervals;

a constrained-envelope generator coupled to said pulse-spreading filter and configured to produce a constrained-bandwidth error signal stream;

a delay element coupled to said pulse-spreading filter and configured to produce a delayed signal stream from said filtered signal stream;

a combining circuit coupled to said ~~pulse-spreading filter~~ delay element and to said constrained-envelope generator, said combining circuit configured to combine said ~~filtered~~ delayed signal stream and said constrained-bandwidth error signal stream to produce a constrained-envelope signal stream; and

a substantially linear amplifier having an input coupled to said combining circuit.

2. (original) A digital communications transmitter circuit as claimed in claim 1 wherein said pulse-spreading filter is a Nyquist-type filter.

3. (currently amended) A digital communications transmitter circuit as claimed in claim 1 wherein said combining

circuit is configured to combine said ~~filtered~~ delayed signal stream and said constrained-bandwidth error signal stream to reduce a peak magnitude component of said filtered signal stream.

4. (original) A digital communications transmitter circuit as claimed in claim 3 wherein said combining circuit is a complex summing circuit.

5. (currently amended) A digital communications transmitter circuit as claimed in claim 1 wherein:

said pulse-spreading filter is a first pulse-spreading filter; and

~~said transmitter circuit additionally comprises a delay element coupled between said first pulse-spreading filter and said combining circuit; and~~

said constrained-envelope generator comprises a second pulse-spreading filter coupled to said combining circuit.

6. (currently amended) A digital communications transmitter circuit as claimed in claim 5 wherein:

said first pulse-spreading filter is configured so that each phase point is transformed into a Nyquist-type datum burst extending over a plurality of unit baud intervals, having a datum-burst peak value occurring in one of said plurality of unit baud intervals and datum-burst zero values occurring substantially at integral unit baud intervals away from said datum-burst peak value, so that said ~~filtered~~ delayed signal stream in each unit baud interval substantially equals the sum of said Nyquist-type datum bursts from a plurality of phase points; and

said constrained-envelope generator is configured so that said second pulse-spreading filter receives error pulses, transforms each error pulse into a Nyquist-type error burst

extending over a plurality of unit baud intervals, having an error-burst peak value occurring in one of said plurality of unit baud intervals and error-burst zero values occurring substantially at integral unit baud intervals away from said error-burst peak value, so that said constrained-bandwidth error signal stream in each unit baud interval substantially equals the sum of said Nyquist-type error bursts from a plurality of error pulses.

7. (currently amended) A digital communications transmitter circuit as claimed in claim 6 wherein said constrained-envelope generator is configured so that said Nyquist-type error bursts exhibit said error-burst peak values and said error-burst zero values at instances in time when said Nyquist-type datum bursts in said delayed signal stream exhibit neither said datum-burst peak values nor said datum-burst zero values.

8. (currently amended) A digital communications transmitter circuit as claimed in claim 7 wherein said constrained-envelope generator is configured so that said error-burst peak values and said error-burst zero values occur approximately midway between said datum-burst peak values and said datum-burst zero values in said delayed signal stream.

9. (original) A digital communications transmitter circuit as claimed in claim 5 wherein said first and second pulse-spreading filters exhibit substantially equivalent transfer characteristics.

10. (original) A digital communications transmitter circuit as claimed in claim 5 wherein:

said first pulse-spreading filter receives one quadrature phase point per unit baud interval and produces two complex samples of said filtered signal stream per unit baud interval;

said constrained-envelope generator evaluates one of said two complex samples of said filtered signal stream produced by said first pulse-spreading filter per unit baud interval; and

said second pulse-spreading filter receives one error pulse per unit baud interval and produces two complex samples of said constrained-envelope error-signal stream per unit baud interval.

11. (canceled)

12. (original) A digital communications transmitter circuit as claimed in claim 11 wherein:

said transmitter circuit additionally comprises a phase mapper coupled to said pulse-spreading filter and configured to select said digitized quadrature phase points from a phase-point constellation, said phase-point constellation having a maximum-magnitude phase point; and

said threshold value is a magnitude value approximately equal to a magnitude of said maximum-magnitude phase point.

13. (original) A digital communications transmitter circuit as claimed in claim 1 additionally comprising an interleaver coupled to said phase mapper.

14. (canceled)

15. (currently amended) A digital communications transmitter circuit as claimed in claim 1 wherein said substantially linear amplifier comprises[[;]]:

a digital linearizer configured to pre-distort said constrained-envelope signal stream into a pre-distorted digital signal stream;

a digital-to-analog converter coupled to said digital linearizer and configured to produce an analog baseband signal from said pre-distorted digital signal stream; and

a radio-frequency amplifying circuit configured to generate a radio-frequency broadcast signal from said analog baseband signal.

16. (currently amended) In a digital communications system, a method for the transmission of a constrained-envelope communications signal, said transmission method comprising the steps of:

filtering a quadrature phase-point signal stream to produce a filtered signal stream, said filtering step spreading energy from each phase point in said filtered signal stream over a plurality of unit baud intervals;

delaying said filtered signal stream to produce a delayed signal stream;

generating a constrained-bandwidth error signal stream from said filtered signal stream and a threshold signal;

combining said ~~filtered~~ delayed signal stream and said constrained-bandwidth error signal stream to produce a constrained-envelope signal stream;

linearly amplifying said constrained-envelope signal stream to produce said constrained-envelope communications signal; and

transmitting said constrained-envelope communications signal.

17. (canceled)

18. (currently amended) A transmission method as claimed in claim 16 wherein:

said generating step comprises the step of filtering an error signal stream having one error pulse per unit baud interval to produce said constrained-bandwidth error signal stream, said filtering step spreading energy from each error pulse in said error signal stream over a plurality of unit baud intervals~~;~~

~~said transmission method additionally comprises the step of delaying said filtered signal stream to produce a delayed signal stream; and~~

~~said combining step combines said delayed signal stream and said constrained-bandwidth error signal stream to produce said constrained-envelope signal stream~~.

19. (original) A transmission method as claimed in claim 16 wherein:

said filtering step comprises the step of receiving one quadrature phase point per unit baud interval;

said filtering step additionally comprises the step of producing two complex samples of said filtered signal stream per unit baud interval;

said generating step comprises the step of evaluating one of said two complex samples of said filtered signal stream per unit baud interval to produce an error signal stream having one error pulse per unit baud interval; and

said generating step additionally comprises the step of filtering said error signal stream to produce said constrained-bandwidth error signal stream having two complex samples of said constrained-bandwidth error signal stream per unit baud interval.

20. (original) A transmission method as claimed in claim 19 wherein said generating step additionally comprises the steps of:

providing said threshold signal; and

determining when ones of peak magnitude components of a stream of complex digital values of said filtered signal stream exceed a threshold value of said threshold signal.

21. (original) A transmission method as claimed in claim 16 wherein:

said filtered signal stream includes two or more complex digital values per unit baud interval, said complex digital values in said filtered signal stream exhibiting local peak magnitudes; and

said generating step is configured so that said constrained-bandwidth error signal stream includes two or more complex values per unit baud interval, said complex values in said constrained-bandwidth error signal stream being responsive to said local peak magnitudes of said filtered signal stream so as to spread energy from selected ones of said local peak magnitudes over a plurality of unit baud intervals of said constrained-bandwidth error signal stream.

22. (original) A transmission method as claimed in claim 16 wherein said transmitting step continuously transmits said constrained-envelope communications signal.

23-29. (canceled)

30. (new) A constrained-envelope digital communications transmitter circuit comprising:

a pulse-spreading filter configured to receive a quadrature phase-point signal stream of digitized quadrature phase points and produce a filtered signal stream, said filtered signal stream exhibiting energy corresponding to each phase point spread throughout a plurality of unit baud intervals;

a constrained-envelope generator coupled to said pulse-spreading filter and configured to produce a constrained-bandwidth error signal stream;

a combining circuit coupled to said pulse-spreading filter and to said constrained-envelope generator, said combining circuit configured to combine said filtered signal stream and said constrained-bandwidth error signal stream to produce a constrained-envelope signal stream;

a digital linearizer coupled to said combining circuit and configured to pre-distort said constrained-envelope signal stream into a pre-distorted digital signal stream;

a digital-to-analog converter coupled to said digital linearizer and configured to produce an analog baseband signal from said pre-distorted digital signal stream; and

a radio-frequency amplifying circuit configured to generate a radio-frequency broadcast signal from said analog baseband signal.

31. (new) A digital communications transmitter circuit as claimed in claim 30 wherein said pulse-spreading filter is a Nyquist-type filter.

32. (new) A digital communications transmitter circuit as claimed in claim 30 wherein said combining circuit is configured to combine said filtered signal stream and said constrained-

bandwidth error signal stream to reduce a peak magnitude component of said filtered signal stream.

33. (new) A digital communications transmitter circuit as claimed in claim 30 wherein:

said pulse-spreading filter is a first pulse-spreading filter;

said transmitter circuit additionally comprises a delay element coupled between said first pulse-spreading filter and said combining circuit; and

said constrained-envelope generator comprises a second pulse-spreading filter coupled to said combining circuit.

34. (new) A digital communications transmitter circuit as claimed in claim 33 wherein:

said first pulse-spreading filter is configured so that each phase point is transformed into a Nyquist-type datum burst extending over a plurality of unit baud intervals, having a datum-burst peak value occurring in one of said plurality of unit baud intervals and datum-burst zero values occurring substantially at integral unit baud intervals away from said datum-burst peak value, so that said filtered signal stream in each unit baud interval substantially equals the sum of said Nyquist-type datum bursts from a plurality of phase points; and

said constrained-envelope generator is configured so that said second pulse-spreading filter receives error pulses, transforms each error pulse into a Nyquist-type error burst extending over a plurality of unit baud intervals, having an error-burst peak value occurring in one of said plurality of unit baud intervals and error-burst zero values occurring substantially at integral unit baud intervals away from said error-burst peak value, so that said constrained-bandwidth error signal stream in each unit baud interval substantially equals the

sum of said Nyquist-type error bursts from a plurality of error pulses.

35. (new) A digital communications transmitter circuit as claimed in claim 30 wherein:

said filtered signal stream is a stream of complex digital values, with each of said complex digital values exhibiting a peak magnitude component; and

said constrained-envelope generator is configured to determine when ones of said peak magnitude components exceed a threshold value.

36. (new) A digital communications transmitter circuit as claimed in claim 35 wherein:

said transmitter circuit additionally comprises a phase mapper coupled to said pulse-spreading filter and configured to select said digitized quadrature phase points from a phase-point constellation, said phase-point constellation having a maximum-magnitude phase point; and

said threshold value is a magnitude value approximately equal to a magnitude of said maximum-magnitude phase point.

37. (new) A digital communications transmitter circuit as claimed in claim 30 additionally comprising an interleaver coupled to said phase mapper.